

24.4: Discussion

Discussion (30 points)

Write a minimum one-page (12 font, single spaced) discussion on the experiment conducted this week. **The assignment will be graded on completeness, clarity of the explanations and the meaningful integration of the collected and calculated data.** Correct grammar and appropriate format for the chemical formulae and chemical reactions is expected. **You may use the outline included at the end of this document on how to build your essay to address each category.**

1. What does soluble and insoluble mean?
2. How is solubility expressed?
3. Why was it necessary to swirl or stir the solutions?
4. Compare the solubility of your compounds with the same cation. What similarities and differences did you find?
5. Compare the solubility of your compounds with the same anion. What similarities and differences did you find?
6. What process is used to determine the solubility of a compound?
7. Suggest another experimental protocol to determine the solubility of a series of related compounds.
8. Insert the picture of a solubility table and include the reference to the source.
9. How do your results from the experiment compare to the solubility table above?
10. Check the ingredient labels of the products (shampoo, laundry detergent, etc.) in your home and identify the most common cations in them. Provide a reason based on your experiment for why this most common cation is suitable for these products.
11. Check the ingredient labels of the foods and drinks in your home and identify the most common cations in them. Provide a reason based on your experiment for why this most common cation is suitable for these products.
12. Pretend that you are a food scientist planning to replace sodium with calcium in a drink. Describe at least one challenge that you can foresee and provide at least one recommendation for addressing it.

Recommended discussion outline:

The concepts I used in this experiment were...

The most important aspect of this experiment was...

The purpose of the experiment was (Hint: it was not to determine the solubility of specific salts) ... By performing this experiment, I learned...

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